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09/876,990	06/11/2001	Shinji Negishi	SON-2141	1834

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RADER FISHMAN & GRAUER PLLC  
LION BUILDING  
1233 20TH STREET N.W., SUITE 501  
WASHINGTON, DC 20036

EXAMINER
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LONSBERRY, HUNTER B

ART UNIT	PAPER NUMBER
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2623

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/876,990

Applicant(s)

NEGISHI ET AL.

Examiner

Hunter B. Lonsberry

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3-6, 8-11, 18-20, 22-26, 28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-6, 8-11, 18-20, 22-26, 28 and 29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3-6, 8-11, and 18-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,828,370 to Moeller in view of U.S. Patent 6,658,199 to Hallberg, U.S. Patent 6,445,738 to Zdepski.

Regarding claims 3 and 5, Moeller discloses a data distribution apparatus comprising:

Receiving means for receiving a special playback request from an external source (commands received from a user set top box 50 and delivered to server 50, column 7, lines 27-37);

Data storage means for storing playback data (column 8, lines 24-47, DVDS, RAID etc), and also storing special playback data (trick play stream, column 8, lines 42-48) and splicing data (index table, column 9, lines 15-20, column 11, lines 17-37), both of which are used for playing back the playback data in a special mode;

Data switching means for selectively outputting the playback data from said storage means in response to the special playback request received by said receiving means (column 10, line 60-column 11, line 5), and for reading the splicing data from said data storage means (column 10, line 60-column 11, line 5, the index lookup tables are referenced to determine which video to provide); and

Transmission means for transmitting the playback, special playback data or the splicing data from said data switching means to the data-receiving terminal via a transmission medium (column 7, lines 34-38, figure 1, data is transmitted from video server 50, via ATM network 40 to a subscriber 52).

Moeller fails to disclose preventing a buffer underflow or overflow in a data receiving terminal, the data switching means generating the special playback data by decoding special playback data by reading the selected playback data from the data storage means in response to a type of special playback and encoding the decoded special playback data when the request signal indicates special playback.

Hallberg discloses a trick play video system which reads the buffer state of a buffer 54 in order to prevent buffer overflow, the number of frames to be transmitted are reduced until the system is capable of transmitting the trick play GOP within the systems capabilities (column 6, line 31-column 7, line 26).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Moeller to utilize the buffer status monitoring and playback capabilities of Hallberg for the advantage of preventing buffer overflow displaying a distorted video signal.

The combination of Moeller and Hallberg fails to disclose the data switching means generating the special playback data by decoding special playback data by reading the selected playback data from the data storage means in response to a type of special playback and encoding the decoded special playback data when the request signal indicates special playback.

Zdepski discloses a system in which a MPEG compressed normal play bitstream is decoded on the fly and then reencoded as a MPEG trickplay stream (figures 4-5, column 10, lines 14-column 11, line 45), thereby reducing storage and bandwidth requirements (abstract, column 5, lines 7-12).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Moeller and Hallberg to utilize the on the fly trickplay stream generation as taught by Zdepski, for the advantages of reducing storage and data transfer bandwidth requirements (column 5, lines 7-12)

Regarding claims 4 and 6, Moeller discloses that the splicing data is used to index the trick play and normal play streams, in order to determine an offset between the two streams, when a user starts a trick play stream the nearest offset is determined

Art Unit: 2623

between the two streams and the trick play stream is then transmitted, likewise when switching from a trick play to a normal play stream, the nearest offset in the normal play stream is determined, and normal play data from that point is then transmitted, these offsets are data with different presentation times (column 10, line 43-column 11, line 16), thus the repeat data would be data which is in the normal play stream with a presentation time prior to the time in the trick play stream.

Regarding claim 8, Moeller discloses a data distribution method for reading special playback data from a storage unit 90 to a receiving terminal 52, said data storage unit storing playback data (column 8, lines 24-47, DVDS, RAID etc), and also storing special playback data (trick play stream, column 8, lines 42-48) and splicing data (index table, column 9, lines 15-20, column 11, lines 17-37), both of which are used for playing back the playback data in a special mode, said data distribution method comprising the steps of:

Receiving a special playback request from an external source 52 (commands received from a user set top box 52 and delivered to server 50, column 7, lines 27-37);

Reading data stored in a data storage unit in response to the special playback request (the MPEG normal play and trick play streams are stored on a storage device, column 8, lines 42-48, column 9, lines 38-5, and are indexed together based on time, so that the positions are equivalent between the normal streams and the faster presentation trick play streams, column 9, line 51-column 10, line 41, the streams are transmitted to the user in response to a request, column 7, lines 34-38)

Reading the splicing data from said data storage unit (column 8, lines 55-64, column 9, lines 15-20, column 11, lines 6-37),

Transmitting the special playback data to the receiving terminal 52, via transmission medium 40 (column 6, lines 19-31).

Moeller fails to disclose preventing a buffer underflow or overflow in a data receiving terminal, the data switching means generating the special playback data by decoding special playback data by reading the selected playback data from the data storage means in response to a type of special playback and encoding the decoded special playback data when the request signal indicates special playback.

Hallberg discloses a trick play video system which reads the buffer state of a buffer 54 in order to prevent buffer overflow, the number of frames to be transmitted are reduced until the system is capable of transmitting the trick play GOP within the systems capabilities (column 6, line 31-column 7, line 26).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Moeller to utilize the buffer status monitoring and playback capabilities of Hallberg for the advantage of preventing buffer overflow displaying a distorted video signal.

The combination of Moeller and Hallberg fails to disclose the data switching means generating the special playback data by decoding special playback data by reading the selected playback data from the data storage means in response to a type of special playback and encoding the decoded special playback data when the request signal indicates special playback.

Art Unit: 2623

Zdepski discloses a system in which a MPEG compressed normal play bitstream is decoded on the fly and then reencoded as a MPEG trickplay stream (figures 4-5, column 10, lines 14-column 11, line 45), thereby reducing storage and bandwidth requirements (abstract, column 5, lines 7-12).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Moeller and Hallberg to utilize the on the fly trickplay stream generation as taught by Zdepski, for the advantages of reducing storage and data transfer bandwidth requirements (column 5, lines 7-12)

Regarding claim 9, Moeller discloses a data distribution method comprising the steps of:

Receiving a special playback request from an external source (commands received from a user set top box 50 and delivered to server 50, column 7, lines 27-37);

Reading data stored in a data storage unit in response to the special playback request (the MPEG normal play and trick play streams are stored on a storage device, column 8, lines 42-48, column 9, lines 38-51)

Decoding the read data so as to generate a special playback signal (column 8, lines 42-5)

Encoding the special playback signal so as to generate special playback data (column 8, line 55-column 10, line 3 MPEG encoded data); and



Art Unit: 2623

Transmitting the special playback data to a data-receiving terminal 52 via a transmission medium 40 (server 50, with communications interface which transmits over an ATM or IP network 40, column 6, lines 19-31).

Moeller fails to disclose preventing a buffer underflow or overflow in a data receiving terminal, the data switching means generating the special playback data by decoding special playback data by reading the selected playback data from the data storage means in response to a type of special playback and encoding the decoded special playback data when the request signal indicates special playback.

Hallberg discloses a trick play video system which reads the buffer state of a buffer 54 in order to prevent buffer overflow, the number of frames to be transmitted are reduced until the system is capable of transmitting the trick play GOP within the systems capabilities (column 6, line 31-column 7, line 26).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Moeller to utilize the buffer status monitoring and playback capabilities of Hallberg for the advantage of preventing buffer overflow displaying a distorted video signal.

The combination of Moeller and Hallberg fails to disclose the data switching means generating the special playback data by decoding special playback data by reading the selected playback data from the data storage means in response to a type of special playback and encoding the decoded special playback data when the request signal indicates special playback.

Art Unit: 2623

Zdepski discloses a system in which a MPEG compressed normal play bitstream is decoded on the fly and then reencoded as a MPEG trickplay stream (figures 4-5, column 10, lines 14-column 11, line 45), thereby reducing storage and bandwidth requirements (abstract, column 5, lines 7-12).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Moeller and Hallberg to utilize the on the fly trickplay stream generation as taught by Zdepski, for the advantages of reducing storage and data transfer bandwidth requirements (column 5, lines 7-12).

Regarding claim 10, Moeller discloses a data distribution system for distributing data, which includes special playback data from a data distribution apparatus comprising:

Receiving means for receiving a special playback request from an external source (commands received from a user set top box 50 and delivered to server 50, column 7, lines 27-37);

Data storage means for storing playback data (column 8, lines 24-47, DVDS, RAID etc), and also storing special playback data (trick play stream, column 8, lines 42-48) and splicing data (index table, column 9, lines 15-20, column 11, lines 17-37), both of which are used for playing back the playback data in a special mode;

Data switching means for reading the special playback data from said storage means in response to the special playback request received by said receiving means (column 10, line 60-column 11, line 5), and for reading the splicing data from said data

Art Unit: 2623

storage means (column 10, line 60-column 11, line 5, the index lookup tables are referenced to determine which video to provide); and

Transmission means for transmitting the special playback data or the splicing data from said data switching means to the data-receiving terminal via a transmission medium (column 7, lines 34-38, figure 1, data is transmitted from video server 50, via ATM network 40 to a subscriber 52).

Said terminal device 52 comprising:

Receiving means for receiving the data transmitted from said data distribution apparatus (column 6, line 66-column 7, line 11, and

Moeller inherently contains decoding means for decoding data received by the receiving means as Moeller discloses that the normal play streams are transmitted as MPEG data (column 6, lines 47-54) and an MPEG decoder is required in order to display the streams.

Moeller fails to disclose preventing a buffer underflow or overflow in a data receiving terminal, the data switching means generating the special playback data by decoding special playback data by reading the selected playback data from the data storage means in response to a type of special playback and encoding the decoded special playback data when the request signal indicates special playback.

Hallberg discloses a trick play video system which reads the buffer state of a buffer 54 in order to prevent buffer overflow, the number of frames to be transmitted are reduced until the system is capable of transmitting the trick play GOP within the systems capabilities (column 6, line 31-column 7, line 26).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Moeller to utilize the buffer status monitoring and playback capabilities of Hallberg for the advantage of preventing buffer overflow displaying a distorted video signal.

The combination of Moeller and Hallberg fails to disclose the data switching means generating the special playback data by decoding special playback data by reading the selected playback data from the data storage means in response to a type of special playback and encoding the decoded special playback data when the request signal indicates special playback.

Zdepski discloses a system in which a MPEG compressed normal play bitstream is decoded on the fly and then reencoded as a MPEG trickplay stream (figures 4-5, column 10, lines 14-column 11, line 45), thereby reducing storage and bandwidth requirements (abstract, column 5, lines 7-12).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Moeller and Hallberg to utilize the on the fly trickplay stream generation as taught by Zdepski, for the advantages of reducing storage and data transfer bandwidth requirements (column 5, lines 7-12)

Regarding claim 11, Moeller discloses a data distribution system (figure 1) for distributing data, which includes special playback data from a data distribution apparatus comprising:

Receiving means (server 50, with network communications interface) for receiving a special playback request from an external source (commands received from a user set top box 52 and delivered to server 50, column 6, lines 18-31, column 7, lines 27-37);

Data storage means 62 for storing playback data (column 8, lines 24-47, DVDS, RAID etc), and splicing data (index table, column 9, lines 15-20, column 11, lines 17-37),

data storage means 62 for storing data (column 8, lines 24-47, DVDS, RAID etc);

decoding means 74 (MPEG decoder) for reading the data from said data storage means in response to the special playback request (user request) and for decoding the read data so as to generate a special playback signal (column 8, lines 42-55);

encoding means 76 (MPEG encoder 76) for encoding the special playback signal generated by said decoding means so as to generate special playback data (column 8, lines 55-column 10, line 3)

Data switching means for reading the special playback data from said storage means in response to the special playback request received by said receiving means (column 10, line 60-column 11, line 5), and for reading the splicing data from said data storage means (column 10, line 60-column 11, line 5, the index lookup tables are referenced to determine which video to provide);

transmission means (server 50, with communications interface which transmits over an ATM or IP network 40, column 6, lines 19-31), for transmitting the special

Art Unit: 2623

playback data obtain by said encoding means 76, to a data receiving terminal 52 via a data transmission medium 40

Said terminal device 52 comprising:

Receiving means (Figure 2, STB coupled to a network via cable 58) for receiving the data transmitted from said data distribution apparatus (column 6, line 66-column 7, line 11), and

Moeller inherently contains decoding means for decoding data received by the receiving means as Moeller discloses that the normal play streams are transmitted as MPEG data (column 6, lines 47-54) and an MPEG decoder is required in order to display the streams.

Moeller fails to disclose preventing a buffer underflow or overflow in a data receiving terminal, the data switching means generating the special playback data by decoding special playback data by reading the selected playback data from the data storage means in response to a type of special playback and encoding the decoded special playback data when the request signal indicates special playback.

Hallberg discloses a trick play video system which reads the buffer state of a buffer 54 in order to prevent buffer overflow, the number of frames to be transmitted are reduced until the system is capable of transmitting the trick play GOP within the systems capabilities (column 6, line 31-column 7, line 26).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Moeller to utilize the buffer status monitoring and playback

Art Unit: 2623

capabilities of Hallberg for the advantage of preventing buffer overflow displaying a distorted video signal.

The combination of Moeller and Hallberg fails to disclose the data switching means generating the special playback data by decoding special playback data by reading the selected playback data from the data storage means in response to a type of special playback and encoding the decoded special playback data when the request signal indicates special playback.

Zdepski discloses a system in which a MPEG compressed normal play bitstream is decoded on the fly and then reencoded as a MPEG trickplay stream (figures 4-5, column 10, lines 14-column 11, line 45), thereby reducing storage and bandwidth requirements (abstract, column 5, lines 7-12).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Moeller and Hallberg to utilize the on the fly trickplay stream generation as taught by Zdepski, for the advantages of reducing storage and data transfer bandwidth requirements (column 5, lines 7-12)

3. Claims 18-20 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,828,370 to Moeller in view of U.S. Patent 6,658,199 to Hallberg, , U.S. Patent 6,445,738 to Zdepski in further view of U.S. Patent 6,029,045 to Picco.

Regarding claims 18-20 and 21-23, the combination of Moller, Hallberg and Zdepski discloses buffering the stream so as to reduce underflow and overflow.

The combination of Moller, Hallberg and Zdepski fails to disclose the use of splicing data is read so that a locus of used bits of the buffer state of the receiving terminal is continuous.

Picco discloses in figure 7 a system which integrates a live video program with a number of local content advertisements which are integrated into a the live video program (column 6, lines 16-41), a number of splicers controlled by CPU 188 maintain the buffer flows and replace the necessary frames for the before and after the insertion points for the local content for viewing by the user (column 11, line 49-column 12, line 30) thus providing a seamless transition between the corresponding playback streams.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Moeller, Hallberg and Zdepski to utilize the splicers and buffering of Picco for the advantage of providing a seamless transition between the corresponding playback streams.

Picco is relied upon to teach the use of splicing data is read so that a locus of used bits of the buffer state of the receiving terminal is continuous (column 11, line 49-column 12, line 30).

4. Claims 24-26 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,828,370 to Moeller in view of U.S. Patent 6,658,199 to



Art Unit: 2623

Hallberg, , U.S. Patent 6,445,738 to Zdepski in further view of U.S. Patent 6,965,724 to Boccon-Gibod.

Regarding claims 24-26 and 28-29, Moeller is relied upon to teach that the playback data is substantially interframe predictive encoded (column 6, lines 47-54).

The combination of Moller, Hallberg and Zdepski fails to teach that the special playback data is inter-frame encoded.

Boccon-Gibod discloses a trick play mode (special playback data) system in figure 4 in which the trickplay data is sent substantially as I frames (column 10, lines 9-34) linked to predetermined jump points (splicing data, column 6, line 32-column 7, line 36) from a source 10 to a decoder 510, the trick play streams may be encoded at the same bit rate and resolution, or may be encoded at a lower respective rate for each, which offers storage space and transmission cost benefits without compromising perceived image quality (column 2, lines 36-48).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Moeller, Hallberg and Zdepski to utilize the I frame trick play streams and tables, as well as the reduced resolutions and bitrates as taught by Boccon-Gibod, for the advantages of providing storage space and transmission cost benefits without compromising perceived image quality (column 2, lines 36-48).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

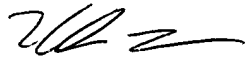
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hunter B. Lonsberry whose telephone number is 571-272-7298. The examiner can normally be reached on Monday-Friday during normal business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HBL

  
HBL Consensus  
Patent Examiner  
Art Unit 2623